Clean Water Program Annual Report 2001Summary

Clark County initiated the Clean Water Program in 2000 to increase protection for our streams, lakes, and groundwater. The program began in response to federal and state mandates for local government agencies to better control and clean stormwater runoff. The clean water fee, which is paid by property owners in unincorporated (Clark County,) supports the enhanced levels of service required to accomplish these goals.

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Clean Water Program

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Clean Water Program Establishes A Solid Foundation

One of the first requirements for protecting or improving water quality is to have a solid foundation of standards, facilities, and programs in place. Since the Clean Water Program began, Clark County has focused on building that foundation by:

- improving stormwater and water quality facilities
- upgrading the standards that protect our water quality
- enhancing inspection, maintenance, monitoring, and education programs
- enhancing enforcement of stormwater regulations

Did You Know?

Clean Water education programs reached more than 16,500 people during 2001, teaching them about water quality and what they can do to help.

Citizens and Businesses Are Doing Their Part

It stands to reason — if the many sources of runoff from our yards, cars, construction sites, and other individual activities can produce significant pollution, then the combined efforts of many individuals can reduce or control pollution. As Clark County citizens and businesses learn more about ways to protect our water resources, more of them are doing their part to:

- adopt clean water practices around homes, yards, or work
- volunteer through one of several county programs
- report suspected pollution incidents
- fund the Clean Water Program (through the clean water fee)

Interested in what you can do? Contact: Clark County Water Resources at (360)397-6118 ext. 4345.

Capital Projects "Build In" Water Quality

Capital program improves our stormwater systems

It takes an extensive network of storm drains, ditches, and pipes to *collect* the water that runs off our yards, buildings, and streets. It takes catch basins, bioswales, vaults with filters, and other facilities to *clean* that water. And, it takes drywells and other facilities to *infiltrate* it back into the ground. Together, these facilities make up our stormwater system.

Our Capital Improvements Program enhances the existing stormwater system and builds new stormwater facilities. It also helps keep our streams (the natural stormwater system) healthy by restoring streams and stream banks.

Future projects will focus on pollution reduction and erosion control

Additional capital improvement needs and projects will be identified as plans are developed for each individual watershed. Two major projects are planned in 2002:

Highway 99 Treatment Facility (near Salmon Creek) – Water quality samples drawn near Highway 99 have shown elevated levels of zinc and copper. Because these metals can be toxic to fish, the Clean Water Program plans to install an underground "filter vault" to catch and remove these metals, as well as oil and sediment. The project will also involve relocating some storm drain pipes.

Existing Stormwater Facility Rehabilitation – The Clean Water Program will modify existing stormwater treatment ponds and grassy swales to improve their efficiency in removing pollutants such as oils, sediments, and metals prior to discharge to streams or groundwater. These facilities are located throughout the unincorporated county area.

Did You Know?

The Clean Water Program maintains approximately 380 treatment and detention ponds and grassy swales in order to treat runoff from streets and other impervious surfaces.

Did You Know?

The county is responsible for the pipes, ditches, and stormwater facilities along 544 miles of rural county roads and within 72 square miles of land in the county's urban areas.

Enhanced Inspection and Maintenance Means More Effective Operation

County creates and adheres to higher standards

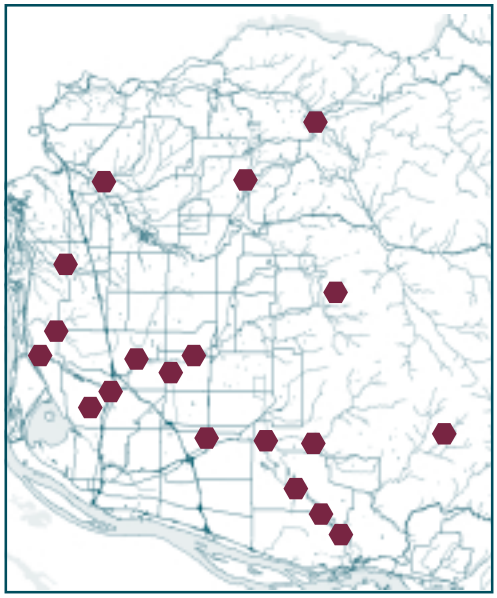
While the capital improvements program *builds* the stormwater system, it takes ongoing inspection and maintenance to *keep the system working* effectively and efficiently. The clean water fee has allowed the county to establish and meet higher standards for this work, including more frequent:

- inspection (to see that facilities are clean and working well)
- cleaning and maintenance (mowing catch basin, cleaning, weeding)
- street sweeping (to remove debris that stormwater would carry into the system)

In 2001, the county inspected and maintained more than 411 county facilities, an increase of 18 percent over the previous year. In addition to county facilities, new regulations now allow the county to inspect and require the cleaning and proper maintenance of private stormwater systems. In 2001 alone, the number of private facilities scheduled for inspection grew from 75 to 399 – an increase of 433 percent. Each year, the number of facilities grows as new developments and roads are built.

Clean Water Fee Funds More Inspection & Maintenance

Types and Number of Facilities	Standards Prior to 2000	Current Standards	Year 2000 Actual	Year 2001 Actual
Bioswales (258)	Maintain as requested	Maintain 4 times/year	Maintained 5 times/year	Maintained 4 times/year
Detention/ retention basins (123)	Maintain as requested	Maintain 3-4 times/year	Maintained 3-4 times/year	Maintained 3-4 times/year
Catch basins (6,700)	Inspect and clean every 3 years	Inspect 1 time/year Clean as necessary	All inspected; 6,700 cleaned	All inspected; 6,070 cleaned
Drywells (900)	No regular schedule	Inspect and clean every 3-5 years	All inspected	All inspected; 139 cleaned
Major roads (105 miles)	Sweep 10 - 12 times/year	Sweep 12 times/year	12 times	11 times
Neighborhood roads (450 miles)	Sweep 6 times/year	Sweep 9 times/year	9 times	12 times



Did You Know?

During 2001, the county inspected and maintained 18 percent more public stormwater facilities and 433 percent more private facilities than in 2000.

Monitoring Identifies Problems and Measures Progress

Water quality monitoring program provides critical support and information

Step by step, the Clean Water Program is building the kind of comprehensive monitoring program that will support efforts to:

- identify water quality problems (and sources of problems)
- document existing health of our lakes and streams and track long term changes
- plan appropriate projects to improve water quality
- demonstrate compliance with the county's National Pollutant Discharge Elimination System (NPDES) permit for the stormwater system

Programs in 2001 identify problems and track stream and lake health

Storm Sewer Screening

In the second year of the storm sewer screening program, approximately 50 sites were sampled and analyzed to detect improper connections or discharges to the stormwater system. Six potential problems were reported to the county's Environmental Services staff, who, in turn, reported progress in eliminating the identified problems at these sites.

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Long-Term Index Project

2001 was the first year of a countywide program to gather and analyze data on existing stream conditions, then monitor these streams to track long-term changes in their health. Ten sites will be monitored on a regular basis. The program includes:

- monthly sampling for bacteria and turbidity (measure of cloudiness of water)
- annual habitat surveys
- annual sampling of freshwater insects that are indicators of water quality
- continuous monitoring of stream temperature (beginning summer 2002)
- continuous measurement of stream flow (beginning 2002)

Several years of sampling and monitoring will be necessary before water quality trends can be detected. At present, the health of each stream varies according to the amount of human disturbance in its watershed. Some are quite pristine, while others are severely degraded.

Lacamas Watershed Monitoring

Monitoring of the lake actually began in the late 1980s. At the end of 2001, all data collected since 1984 was analyzed to identify trends. Although there is less phosphorus entering the lake now, the existing amount is still sufficient to produce algae blooms and low dissolved oxygen, and the lake remains in much the same condition as it was in the mid-1980s. It hasn't gotten worse, but continued lake and watershed management will be required to keep it desirable for swimming and fishing.

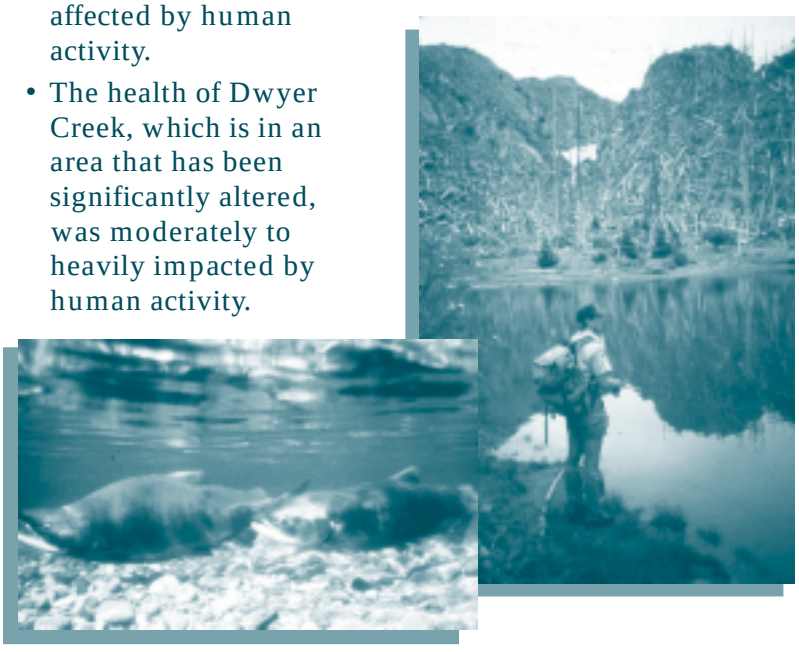
Did You Know?

Water quality monitoring has shown that since 1984 the amount of phosphorus in Lacamas Lake has decreased by 50 percent. Although this is encouraging, there is still enough phosphorus to cause water quality problems such as algae blooms and low dissolved oxygen. Continued water quality management efforts will be required, and continued monitoring will track the progress.

Matney and Dryer Creeks Sub-Watershed Surveys

This short-term project collected basic stream health data and correlated it to the level of human activity (disturbance of land) in those watersheds. This technique will serve as a prototype for future watershed characterization efforts. The effort showed that:

- The health of Matney Creek, which is in an area that has been somewhat altered, was slightly to moderately affected by human activity.
- The health of Dwyer Creek, which is in an area that has been significantly altered, was moderately to heavily impacted by human activity.



Did You Know?

In 2002, grants from the State of Washington will provide $470,000 toward Clean Water Program monitoring projects.

State Grants Help Boost Monitoring Efforts

Grants from Washington's Department of Ecology helped expand Clark County's monitoring efforts and extend Clean Water Program funds. These grants provide 75 percent of the funding for specific projects, with the remaining 25 percent coming from the clean water fee.

Watershed Characterization Project Grant:

A $240,000 grant to Clark County and the Lower Columbia River Fish Recovery Board is funding important watershed characterization and fish recovery work. The funds will enable Clark County to identify and fill in gaps in existing data collection efforts so that we can collect more comprehensive background data on water quality, stream flow, rainfall, stream health, and nearby land cover.

This work will also enable the Lower Columbia River Fish Recovery Board to prepare an Endangered Species Act recovery plan. This plan will include identifying priority habitat areas and improvement projects.

Monitoring Grant:

A second grant from the Department of Ecology will further extend the Clean Water Program's efforts and help the county meet the monitoring requirements of its federal stormwater management permit. This $230,000 grant will provide funds for:

- training county and local agency staff, as well as volunteers, to use standardized methods to monitor local streams
- coordinating and pooling data from all monitoring agencies and activities
- maintaining a pool of volunteer monitors
- evaluating and suggesting improvements to these monitoring efforts

Stormwater and Erosion Control Code Enforcement

Clark County enforces regulations on new construction to control the impact of stormwater on streams, wetlands, lakes, groundwater, and wildlife habitat. These ordinances set forth the regulations and requirements:

- Stormwater and Erosion Control Ordinance
- Wetlands Protection Ordinance
- Habitat Preservation Ordinance
- Critical Aquifer Recharge Areas Ordinance

Improvements seen in development and building practices

New ordinances and educational efforts are beginning to pay off. During 2001, code enforcement personnel observed improvements in the erosion control measures implemented by developers and builders. Several factors contributed to this success.

Contractor Education

More time is spent educating contractors about erosion control, working with homebuilders in erosion control certification classes and giving educational presentations to contractors and excavators. Future outreach will focus on new homeowners and landscapers.

Erosion Control Certification

Building permits now require that developers have an erosion control expert who has completed an approved erosion control certification class.

Coordination

A series of meetings with building, development, and code enforcement inspectors resulted in improved consistency of their processes.

Did You Know?

In 2001, the number of code enforcement inspections increased by 63 percent – from 2,200 in 2000 to 3,512 in 2001. Inspections include a review of grading and erosion practices for impacts on water quality, surface water, habitat, and wetlands. These inspections are followed by notices, letters, additional contacts, citations, "stop work" orders, or referrals.

Education and Volunteers Leverage County Efforts

Citizens and businesses expand what the clean water program can accomplish

"Every little bit helps."

"An ounce of prevention is worth a pound of cure."

These familiar sayings probably weren't coined in reference to water quality, but they apply. Every time someone learns about "clean water habits" and changes the way they do things, it helps. Every time we prevent pollution in the first place, it saves money and effort. That's why educational and volunteer programs play such an important role in the Clean Water Program.

Watershed Stewards – In 2001, volunteers gave nearly 1,600 hours of volunteer time staffing community events and fairs, coordinating tree plantings, monitoring streams, and in other activities. If staff had provided the same services, this would have been equivalent to $24,500 in salaries.

Technical Assistance – Clark County staff provided information and technical assistance on water quality practices to 153 businesses, 40 residences, and five area school districts.

Natural Gardening Programs – Several programs promote awareness of how individuals can reduce pollution by using natural gardening techniques and avoiding the use of toxic chemicals:

- The "Mother Nature's Garden" puppet show reached 4,000 elementary school children and adults in 2001.
- Approximately 12,000 people viewed a natural gardening display at three regional libraries, major community events, and the Clark County Fair.

River Rangers – Volunteers presented this water quality education program to approximately 500 fourth-grade students.

"The River Starts Here" — Clark County participates in this regional campaign to raise awareness that storm drains lead to streams.

For more information:

Contact us at cleanwater@clark.wa.gov or call (360)397-6118 ext. 4345 for copies of these publications:

- *Clean Water Begins at Home* – Fact sheets about yard care, composting, disposing of pet waste, swimming pool and spa care, and more
- *Stormwater Pollution Prevention Manual* – Information and techniques for businesses

good for FISH good for US

For questions or comments, contact:

Clean Water Program, Clark County Environmental Services, at (360)397-6118 ext. 4345 or Email: cleanwater@clark.wa.gov

Did You Know?

Clark County requires certification for all contractors that install and maintain erosion control facilities. Last year, 611 contractors were trained and certified. The program is administered by the Building Industry of Southwest Washington, and the county provides part of the training.

Storm System Mapping

The storm sewer system is divided into three categories:

- Urban (pipes, manholes and catch basins)
- Rural (ditches and culverts)
- Stormwater facilities (detention or retention facilities and bioswales)

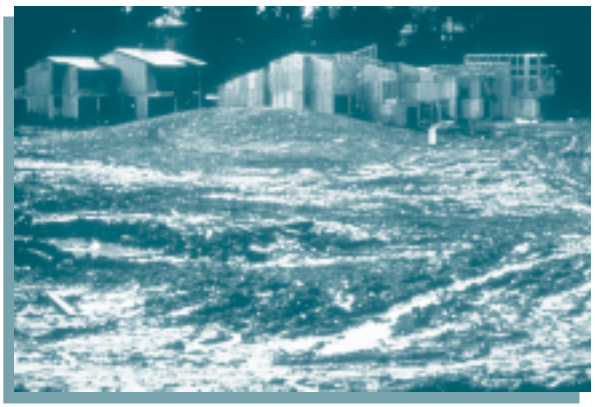
In 2001, county staff began taking a comprehensive inventory of these facilities and putting them on a map. Ultimately, all data will be computerized and will provide important information for maintaining the existing system and planning for the future. This is not a small task. During 2001, the Clean Water Program:

- Inventoried and mapped 72 square miles of stormwater facilities within urban areas of Clark County, including approximately 1,900 catch basins, 1,000 manholes, 2.4 miles of ditches, and 59 miles of storm sewer pipe.
- Inventoried 334 miles of the 904 miles of county-maintained roads within rural areas in Clark County. This included 1,379 culverts and 292 miles of roadway ditches.
- Partially inventoried stormwater facilities, including approximately 411 public facilities and 400 private ones. These numbers are expected to increase as the inventory is completed and as growth continues.

Did You Know?

Stormwater and erosion control plans for developments are approved only after detailed county review to determine if plans conform to stormwater regulations. During 2001, the county performed 1,256 erosion control inspections and 1,420 stormwater control inspections.

Building permits are not issued until after the stormwater system for the development is complete. During 2001, the county performed 12,278 building inspections.



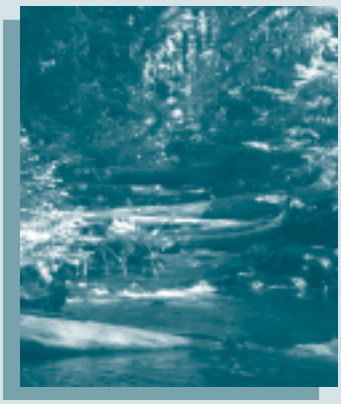
Need Some Help With Water Quality Terms?

1. **Bioswale** - grassy channels that collect stormwater and use plants to trap and clean pollutants from the water
2. **Catch basin** - storm drain that collects stormwater from streets and parking areas, then routes it to storm sewer pipes
3. **Drywell** - large vertical pipe that receives stormwater and disperses it into the ground
4. **Detention pond** - landscaped area that first collects stormwater, then releases it slowly into the storm sewer system, reducing stream erosion
5. **Stormwater** - rainwater that runs over streets, lawns, driveways, and other surfaces, picking up pollutants along the way
6. **Watershed** - an area that is bounded by mountains or hills – rainwater in a watershed flows downhill into a common stream, river, or lake

The Clean Water Commission

The Clean Water Commission is appointed by the Board of Clark County Commissioners to ensure that a *balance of community interests* is involved in making clean water recommendations. This group of citizens:

- makes storm and surface water management recommendations about financing, policies, and incentive programs
- reports on program effectiveness
- promotes clean water programs and coordination among agencies, interest groups, and citizens



Current members of the Clean Water Commission are Robert Agard, Cal Ek, Dana Kemper, Mary Martin, Susan Rasmussen, Don Steinke, Art Stubbs, and Judy Schramm.

The Clean Water Commission meets the first Wednesday of every month from 6 to 8 p.m. at the Clark County Public Works Operations Center, 4700 NE 78th Street, Vancouver. Meetings are open to the public. For meeting information, please contact Kelli Frost, Environmental Services Division, at (360)397-6118 ext. 4345 or send an e-mail to cleanwater@clark.wa.gov.

Did You Know?

Some people still dump used oil or old paint down storm drains. This practice can contaminate streams or ground water. Fortunately, many people are taking advantage of Clark County's hazardous waste collection program. In 2001, this program collected:

- 27,697 gallons of used oil at household hazardous waste collection sites
- 57,912 gallons of used oil through curbside recycling
- 14,421 gallons of used oil at used oil collection sites
- 342,133 pounds of household hazard waste
- 246,430 gallons of latex paint

These materials won't find their way into our water!

Did You Know?

The clean water fee funds the county's Watershed Stewards program. In 2001, this program had 42 volunteers who gave nearly 1,600 hours of service. The county, in partnership with the Washington State University Cooperative Extension Service, will train 25 new stewards in 2002. For information about becoming a Watershed Steward, call WSU Clark County Cooperative Extension at (360)397-6060 ext. 7703.

For more information:

Clark County Clean Water Commission Annual Report
(summary or full report)
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